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ABSTRACT

This booklet provides business and office teachers with background information, supporting materials, recruiting techniques, and a suggested unit plan that integrates the concepts related to dictation systems into information processing curricula. An "Introduction" (Donna Everett) discusses the need for dictation skills. "Need for Dictation Systems" (Sue Ann Miller) also discusses the need for dictation systems skills, as well as popular types of dictation equipment, and uses of these systems. "Skills Needed in Dictation Systems" (Kathy Barton) focuses on the skills needed by dictators and transcribers. Three foundation skills (basic skills, thinking skills, and personal qualities) and technical skills are considered. "Types of Dictation Systems" (Sylvia Wood) describes two major categories: manual and machine. Two types of machine systems are discussed: electric/analog and electronic/digital. "Methods for Teaching Dictation Systems" (Linda Coleman) focuses on three methodologies: general, machine, and manual. "Recruiting Techniques for Dictation Systems" (Rhonda Henslee) sets forth these steps: setting goals, planning creative activities, targeting the right audience, enlisting various types of media, and marketing the benefits. "A Unit Plan for Dictation Systems" (Yeong Chang) consists of an overview, student and teacher performance objectives, topic outline, student learning activities, and resource materials. Appendixes include 28 references and a 21-item bibliography. (YLB)

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THE HIDDEN TECHNOLOGY: DICTATION SYSTEMS

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In Fulfillment of Requirements for a Graduate course: Seminar in Dictation Systems

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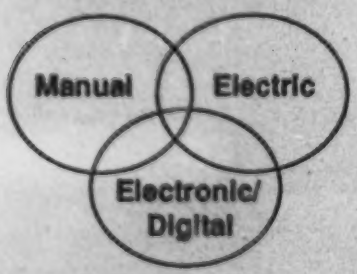
DICTATION SYSTEMS



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THE HIDDEN TECHNOLOGY: DICTATION SYSTEMS

INTRODUCTION

Even as these words are being written, changes are occurring in technology which will affect how the office--generally where information is the key product--will handle work, how workers will perform the work, and how the organization will be structured to manage the work. These changes are primarily due to the increasing demand for information and the need of business and industry to control the flow of information in an ever-competitive world market. The challenge of accessing, manipulating, and processing data into usable information for effective decision making will become even more critical as the amount and availability of data increase.

Along with the technological developments, three other forces will impact the office: a focus on increased productivity, a need to control costs, and the opportunity and challenge to deal with culturally diverse and special needs employees.

First, an acute need exists to augment the productivity and the effectiveness of office workers. While the nature of the work done by office workers may not be so precisely measurable as work done by factory workers, it is recognized that the office is a very labor-intensive environment which can be improved by the wise application of new technologies.

Another challenge centers on the need to harness the spiralling costs of office work. Increased productivity and decreased office costs will be enhanced by providing tools whereby office workers can become more efficient and effective. These

tools, however, will be effective only in the hands of competent workers.

The third challenge is to use technologies to develop an understanding of and skills to deal with racial, ethnic, and international cultures in the world markets. Additionally, special needs workers will use technology to make important contributions to the workforce.

Often the changes in information technology have been described as *revolutionary* rather than *evolutionary* because of the impact of the computer--more specifically the microcomputer--because it not only connotes change, but it also implies *rapid* change. The increasingly sophisticated tools which enable information to be produced, processed, stored, and transferred are affecting job design, work group structures, and individual and organizational performance. Put all of these tools together and the outcome is an integrated office system, designed to deliver information to the right person at the right time for effective decision making.

Acknowledgement of the changes in office structure must be concomitant with the recognition that new skills will be expected. Peter Drucker (1986), management guru, has recognized that a flatter organization requires workers to be self disciplined, be able to ask questions, be able to set goals and objectives, be flexible, make fast decisions and quick responses, and accept responsibility. The trend to flatter organizations becomes more complex as middle levels of management are compressed and squeezed

and the demand for clerical workers with technological, interpersonal, and management skills rises. Key decisions are increasingly being made by those who can most efficiently input, store, retrieve, and disseminate information.

Among the technology skills related to the automated office that should be integrated into the business and office curriculum include the need for, the advantages and disadvantages of various kinds of dictation systems, as well as the applicable information processing skills needed to compete for and maintain positions in today's office. In this study, dictation systems will be referred to as the *hidden* (or overlooked) technology.

The term, dictation systems, is a broad concept that incorporates manual shorthand methods, electric dictation/ transcription machines, as well as the emerging electronic and digital voice systems. All of these systems make it possible to record oral conversations accurately and efficiently. In addition, ideas may be captured while they are timely and fresh (Smith, 1988, p. 5).

The need for stenography and dictating machine skills, and familiarity with machine dictation systems is being reflected in the want-ads of many newspapers. Advertisements continue to emphasize dictation skills in top-level administrative and executive assistant positions in all fields and for legal and medical openings. Personnel directors and employment agencies also state that these skills are seen as assets for their employees when it comes time for promotions and access to high-level positions.

Many dictation systems in today's office are easy to learn, easy to use, fast, versatile, and integratable. The fact that these systems will fit into a small-, medium- or large-size office is a unique aspect of their versatility. In addition, many dictation systems are being integrated with other information processing systems in the office: voice technology software with personal computers, court reporting systems with personal computers and laser printers, and dictating machines and word processing software. At the present time, dictation systems are rapidly expanding the proficiency of office personnel; however, they remain an untapped resource.

The purpose of this booklet is to provide business and office teachers with background information, supporting materials, recruiting techniques, and a suggested unit plan which integrates the concepts related to dictation systems into information processing curriculum. To accomplish the purpose, the following sections are included in this booklet: Need for Dictation Systems, Skills Needed for Dictation Systems, Types of Dictation Systems, Methods for Teaching Dictation Systems, Recruiting Techniques for Dictation Systems, and a suggested Unit Plan for Dictation Systems.

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NEED FOR DICTATION SYSTEMS

Dictation systems have been in existence in the office for many years. This part of office technology has been silent for the

most part, but is experiencing a move to the front lines.

Currently, shorthand is not in as much demand as machine dictation/transcription. Advancing technology as well as a decline in number and quality of workers has created a modest growth curve in the need for dictation systems (Smith, p. 5). The Work in America Institute reports that the shortage of secretarial workers "is further compounded by the fact that the educational system is turning out graduates who are less, rather than more, capable of performing clerical and secretarial work" (Schindler, 1984, p. 3). In the past, workers were expected to use symbol shorthand and take dictation with a pen and pad, retire to an electric typewriter, and generate exact copies. Now workers are able to use alphabetic shorthand which have increased the amount of students graduating with shorthand skills. Technology also has made the machines in the office easier to learn and use. With the advent of the microchip, digital dictation systems, and telecommunications improvements, the office is becoming global. This global office will allow the savings of time and money--which equals profits for the business. In a current study by Lena B. Cunningham Smith in the Business Education Forum (1988), she states that

> according to the Dartnell Institute of Business Research, a Chicago-based business research publisher, dictating an average business letter to a machine, versus dictating the same letter to a secretary who jots down notes or takes shorthand, results in at least a 25 percent cost savings (p. 5).

In researching the need for dictation systems skills, newspaper employment ads were consulted from various parts of the United States and some foreign countries. The findings basically

underscore the need for transcription skills as they have for several years: From administrative assistants to bookkeepers and to secretaries and clerks in medical, legal, and general industry jobs, shorthand is required. But when business and employment agencies were consulted, shorthand was an extra in the final hiring process. Some specialty jobs are appearing in this same workforce, these include: medical transcriptionist, legal secretary, and court reporter. Why are these specialty jobs in the area of dictation? Technology has changed the equipment these workers use, making it possible to compete in a world market and enhancing contributions made by workers with special needs. This in turn has created a need for office workers with machine transcription skills. The industry has answered this need with two types of dictation equipment. Analog technology is the industry standard. Digital technology has created new types of machines that incorporate modems, microcomputers, Integrated Systems Digital Networks, fiber optics, mainframes, and networked computer systems.

The most popular type of dictation equipment is the portable--a pocket-sized lightweight device that uses regular, micro, and pico cassettes for recording. An executive can dictate from any location and then mail the cassettes back to be transcribed on the microcomputer before returning to the office.

The second type is the desktop system. One model of desktop dictation can tie four executive stations in to one secretarial station. The third and most rapidly changing type of technology is the centralized system. This system employees magnetic disks, a

"totalizer" function that gives a printed summary of all activity for the past 24 hours, it is easier to add to, and permits several people to work from the same disk with the work being broken down into segments (Smith, p. 6).

The improvement in technology has created an office atmosphere both challenging and demanding to today's worker. Workers in today's and tomorrow's offices face a shrinking global market as well as tight economic conditions. It is estimated that even middle- to small-size offices will be doing business outside the United States soon.

What would these systems be used for? Tasks that are recorded through dictation are providing historical documents, actual testimony in real time, minutes of meetings, legal records, medical records, and much more. The office of today and tomorrow will be a *virtual* or self-contained office. In the virtual office, executives will be looking for fast, cost-efficient methods of preparing all their work. If dictation equipment can save a business that employees a worker making $30,000 a year one hour a day, a savings of $3,750 will result ($30,000 a year equals an hourly rate of $15.37) (Smith, p. 5). A study by Philips Dictation Systems (1988), reveals that

> the days of one secretary per manager are gone. The secretary or typist now works for between 2.6 and 4.3 people. At the same time, bosses are more time efficient when they maximize effective use of secretarial time (Office Equipment and Products, pp. 24-25).

The Philips study also reveals that in Europe between 35 and 45 percent of managers said they "had no regular secretarial or typing

support at all. More than one-third of managers who do have secretaries or typists still type their own documents on a sporadic or regular basis" (p. 25).

Pat Horton, a director at the London Business School, said

> The paper work mountain still exists despite high technology. Middle and senior managers who make decisions about office technology often know less about it than their secretaries. If the paperwork mountain is to decrease, managers need to learn more about the available office automation tools" (Office Equipment and Products, p. 25).

If managers are to use the equipment and make the decisions, what skills will they need? Will there need to be additional classes taught to prepare the secretarial office worker as well as the managers? These questions have not been ignored in this study. Some of the skills will be the same for both the dictator and the transcriber. Both employees will need to possess general skills such as oral, nonverbal and written skills, as well as grammar and English skills. Equipment, software, editing, formatting, and proofreading skills will be valuable to both the transcriber and dictator.

These skills will need to undergo the same revolution that has occurred in the technological side of the office. Educators will have to continue to teach these skills, but update and reskill future workers with the high-tech side of dictation/transcription.

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SKILLS NEEDED IN DICTATION SYSTEMS

The next part of this booklet is focusing on the skills needed in dictation systems by dictators and transcribers. Many employers say that the most important skills for any employee are the 3R's--reading, writing, and arithmetic. The employers are saying "Give me people who can read, write, and do simple math and I'll train them for the jobs I have available" (Carnevale, Gainer, and Meltzer, 1988, p. 8). But the research for dictation systems has found that employers expect *much more* from employees.

According to the Secretary's Commission on Achieving Necessary Skills (SCANS), there are five competencies and three foundation skills and personal qualities that are needed for solid job performance (1991). These eight areas represent the essential preparation for all students, both those going directly to work and those planning to further their education. These areas can be applied to anyone so that they will be able to compete in a global economy.

The five competencies that workers should be able to productively use are:

1. Resources: allocating time, money, materials, space, and staff;
2. Interpersonal skills: working in teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds and special needs;
3. Information: acquiring and evaluating data, organizing, and maintaining files, interpreting and communicating, and using computers to process information;
4. Systems: understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems;

5. Technology: selecting equipment and tools, applying knowledge to specific tasks, and maintaining and troubleshooting technologies (SCANS, 1991, p. vii).

The SCANS report also identifies a three-part foundation of skills and personal qualities that are at the core of job performance. The foundation skills are: basic skills, thinking skills, and personal qualities. It seemed appropriate to apply these competencies and foundation skills to prepare students in dictation systems skills for success in today's offices.

Basic Skills

The basic foundation skills that dictators and transcribers should have are reading, writing, listening, speaking, and performing arithmetic and mathematical operations.

Dictators as well as transcribers should be effective communicators. People spend most of their day in some form of communication. "The average person spends 8.4% of communication time writing; 13.3%, reading; 23%, speaking; and 55%, listening" (Carnevale, Gainer, and Meltzer, p. 11). Dictators need to use correct grammar as they dictate or write correspondence. Whether dictating for a transcriber or into a machine, ideas should be dictated in a clear, coherent, and precise manner (Haggblade, 1990, p. 18). The dictator should provide the listener with an understanding of the importance of voice inflection and body language when communicating. The dictator should enunciate clearly so that he/she is understood. If notes are written out for the transcriber, they must be legible so that the transcriber does not

spend a great deal of time deciphering handwriting or making errors due to misinterpretation (Schindler, 1984).

The transcribers should have good grammar skills, also. They must find any mistakes that the dictator overlooks and correct them before the final draft of the correspondence. To find grammar mistakes, transcribers must have good proofreading skills. This is where good reading skills are important. Reading tasks on the job require the reader to be analytical, to summarize information, and to monitor one's own comprehension of the reading task. Editing and formatting skills also are important to the creation of correspondence. Office manuals will aid in these skills if the transcriber is new to the job or is not sure how the office formats its correspondence.

The dictator and transcriber should enhance their listening skills. Since listening is the most frequently used communication skill, it is imperative that the student's or worker's productivity increase through enhanced listening training (Nixon and West, 1989, p. 27). Ineffective listening is costly. Because of listening mistakes, appointments have to be rescheduled, letter retyped, and shipments rerouted (Nixon and West, p. 28).

Both the dictator and the transcriber need to be able to perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical functions. Workplace math skills should be taught contextually to reflect their actual use on the job; instructional materials should simulate specific job tasks. Most tasks build on prior math

knowledge, emphasizing problem identification, reasoning, estimation, and problem-solving (Carnevale, Gainer, and Meltzer, pp. 10-11).

Thinking Skills

The second foundation skill is thinking skills. These skills include thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning. This skill area will focus on the transcriber.

A transcriber should know how to learn. Employers say that this is the skill that is the key that unlocks future success. Equipped with this skill, an individual can achieve competency in all other basic workplace competencies. Without this skill, learning is not as rapid nor as efficient and comprehensive (Carnevale, Gainer, and Meltzer, pp. 8-9). Learning is now a fact of life in the workplace. Technology has made learning more important in the workplace. Technology today is everywhere, demanding high levels of competence in selecting and using appropriate technology, visualizing operations, using technology to monitor tasks, and maintaining and troubleshooting complex equipment (SCANS, p. 12).

Transcribers should be able to solve problems and think creatively. More American companies are requiring their workers to be more involved in the everyday operations of the business. The worker must be able to organize ideas and information, recognize problems, and implement a plan of action. This all works together with problem solving and reasoning. If a transcriber discovers a

problem with correspondence, he/she must organize alternatives, reason, and decide what to do to solve the problem or, at the very least, to offer a solution. The transcriber may realize that a wrong figure or name was used during the dictation when transcribing the material. Just imagine the problems that may arise from the wrong quotation figures in a job specification! Or the quotation is sent to the wrong customer! When this occurs, the transcriber must make sure that the material is corrected with the right figure or name. The transcriber may encounter a blank spot in the tape from which he/she is transcribing. The transcriber must try to figure out what the missing information is and correct it. If the information cannot be retrieved or figured out, then he/she may have to go back to the dictator. Every possible way to try to retrieve the information must be tried before approaching the dictator. These are only some of the problems that arise in dictation; the important point is that the transcriber is able to reason out a solution to the problem.

Personal Qualities

The third foundation competency is personal qualities. This includes qualities such as responsibility, sociability, self confidence, high ethics and morals, integrity/honesty, and self management. These qualities should be displayed by both the dictator and the transcriber.

An individual's effectiveness in the workplace can be linked directly to positive self esteem and successful self management (Carnevale, Gainer, and Meltzer, p. 13). For a business to succeed

in today's economy, employees must be motivated; and they must possess the ability to set and to meet reasonable goals. Employers must not constantly "put down" employees, making them feel worthless and powerless, but must assist them in recognizing their skills and potential. Employees should understand emotional set points and abilities to cope with stress, change, and criticism. Employers want employees who have pride in themselves and their potential to be successful and who know how to get things done. Dictators must relay these feelings to transcribers so they have the confidence that they need to accomplish the goals they set.

The dictator and transcriber must get along and become a team working toward the same goals. There has been a tremendous increase in the use of teams in the workplace because of the example set by successful foreign manufacturers. The Japanese took advantage of a management technique called "quality circles." Quality circles are composed of teams of employees who are each responsible for the quality of an entire product (Busse, 1992, p. 24). Consequently, more American manufacturers are using components of this technique. Thus, it becomes important that all workers get along. For everyone to get along with each other, good manners and good attitudes are very important. When people work together and cooperate, progress is made.

> Teamwork can only occur when team members provide and receive feedback in a focused manner. Individuals gather and process information in personalized ways; good teamwork calls for the recognition and use of certain valuable differences between members of the team (Carnevale, Gainer, and Meltzer, 1988, p. 15).

The work between a dictator and a transcriber is interpersonal, and they should work together as a team to accomplish success. The goal of the dictator and the transcriber is to communicate effectively so that the result is enhanced productivity.

Responsibility is what many workers will need to be able to advance in business. The more responsibility a person holds, the more confidence upper management will have about that person. Transcribers have a lot of responsibility. They are responsible for prioritizing tasks, following through on the tasks, recognizing and solving problems, formatting and editing documents, and communicating properly.

Other qualities that are very important to the dictator and to the transcriber are integrity/honesty, high ethics and morals, and respecting confidentiality. Important information goes through the office everyday that must be kept confidential. The transcriber must keep all information that is dictated or that goes across his/her desk confidential. Dictators expect the transcriber to be honest, so that no bond between the two is broken. Moral and ethical behavior in and out of the office is a must. Employers and employees must realize that their actions reflect on the company.

Technical Skills

In addition to the basic skills, thinking skills, and personal qualities that employees must possess, technical skills are essential. Technical skills include acquiring and using information; understanding complex relationships in a systems environment; and working with a variety of technologies.

Historically, manual dictation systems dominated the way transcribers took dictation (if used at all). New dictation/ transcription technologies involving electric and electronic methods are prevailing. Transcribers have to adapt to the change and be willing to learn how to operate new equipment so that data can be formatted into useful information. Additionally, selecting new technologies and troubleshooting equipment are critical competencies. Proficiency in various software packages is necessary for the transcriber so that material can be formatted and produced accurately and in a timely fashion.

Effective performance in today's workplace requires high levels of performance in the three-part foundation of intellectual skills and personal qualities, as well as the five competencies. These competencies represent the attributes employers seek in today's and tomorrow's employees. These skills could be used to prepare and develop employees to work with any kind of dictation system.

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TYPES OF DICTATION SYSTEMS

Dictation systems are divided into two major categories: manual and machine. Manual dictation encompasses the use of symbol and alpha transcription using pen and paper. Machine transcription can take the form of either electric/analog or electronic/digital.

Manual

Manual transcription has existed since the beginning of recorded history. Through the many centuries manual transcription has evolved from the crude drawings of cavemen to the flowing lines of shorthand. Today's shorthand can be encountered in two forms: symbol and alpha. Symbol shorthand is usually based on the Gregg system, even though other symbol systems do exist. A symbol system encompasses the memorization of short forms and character symbols that can allow a person to take verbatim notes. Since an average person speaks six times faster than he/she writes, these symbols allow a trained transcriptionist to match a dictator's speaking speed.

Alpha systems use the actual characters of the English alphabet to condense the spoken word. *Super*Write™ is becoming a popular alpha system. An article in the May/June 1989 issue of The Balance Sheet describes this system as follows:

> *Super*Write™ is based primarily on longhand and secondarily on phonetics. It is quick, easy-to-learn writing system that is easy to write and read, and one that can increase writing speed significantly (Lemaster and Hankin, p. 15).

According to Melba W. Benson, "*Super*Write™ has only half the memory load of other alphabetic systems and does not require any changes in writing style" (1990, p. 19). Another popular alpha system is Joe Pullis' Speedwriting®.

> Speedwriting® Shorthand, Regency Edition, gives vocational students an advantage in the job market: the opportunity for higher paying secretarial and office administrative positions. And Speedwriting® skills help prepare academic students for the demands of college

lecture classes" (Business Education Forum advertisement, 1988, n.p.).

Many other alpha systems are currently being used and developed.

Machine: Electric/Analog

Analog systems are divided into three and sometimes four different sizes. The basic three sizes are portable, desktop and centralized. Some authors add a fourth size in between desktop and centralized called a desktop network.

Portables are the smallest and most popular units in the marketplace today. They can weigh anywhere from four ounces to one pound (Smith, p. 5). This size of unit is most popular because of its flexibility; it can be taken virtually anywhere. These units are usually used in small offices where dictation is rare or the dictator is constantly traveling. These machines have also become a status symbol for young executives which have increased the machine's popularity (Gragg, 1989, p. 54). Because of size variance, portables use different size cassettes for storage. The smallest of these is pico then mini, micro, and, finally, the standard cassette. Cassette tapes are considered external storage because they can be removed from the machine. In a portable system the dictator must deliver the cassette to the transcriber either in person or by some other means of delivery.

Desktop systems are popular in offices where there are at least four dictators and dictation is used on a regular basis. In a desktop system each dictator has a desktop unit which records the message--usually on standard cassettes and in some cases on paper. The dictator then delivers the tape to the transcriber to produce

the hard copy. The desktop unit also may be connected to a telephone line and allows the dictator to record messages from a remote location.

A desktop network integrates two or more desktop units. An integrated unit is usually located on the transcriber's desk. This type of system "integrates all the capabilities of desktop systems with economy of not having multiple desktops" (Smith, p. 5).

Centralized systems are often connected to large word processing centers. Centralized units use internal storage in the form of an endless loop of magnetic tape or cassettes. Internal storage, in the form of an endless loop, is permanent. "Centralized systems provide dictation to large groups of people who dictate at various levels" (Smith, p. 5). The systems support thousands of users, provide immediate access, and eliminate tape delivery. Centralized systems are best suited for large companies and major service agencies such as hospitals.

Machine: Electronic/Digital

Electric/analog machines are quickly being replaced by the emerging digital technology. Digital dictation encompasses more than 50% of the larger dictation systems. Digital systems are located primarily in centralized or desktop units and are slowly filtering into portable units.

Centralized units are "primarily used by insurance companies, sales representatives, hospitals and law firms" (Nevin, 1991, p. 112). Centralized digital systems provide the same advantages of centralized analog systems. Dictators can deliver messages from

remote locations; various dictation levels can be supported; multiple users can use the system simultaneously; and tape delivery is eliminated. Centralized units are controlled by a mainframe computer and use some type of magnetic media (hard drives, tapes, disk packs) to store information. A backup system accompanies a digital system either in paper or tape form.

The desktop system is usually designed for small businesses. In some companies, "portable desktop units would serve to support large systems. The use of the PC as an integrated part of such a system will also be apparent in the very near future" (Lavoie, 1990, p. 83). Desktop systems are managed by a microcomputer. The usual storage media are hard drives or floppy disks. These systems also are backed-up by paper or tape.

Digital systems integrate various types of hardware. According to James H. Tourtelotte and Al McGowan in a recent article in Law Practice Management (1992),

> Digital voice technology is part of the move toward integration. From dictation to cellular phones to computers (via modem) and facsimile technologies, recent advances in standardization have paved the way for ISDN (Integrated Systems Data Network), the predicted global integration of the future (n.p.).

Other networks that may be associated with digital systems may be classified as local area, wide area, and metropolitan. Such networks may utilize satellites, microwaves, radio waves, fiber optics, coaxial cable, and telephone lines to transfer information.

Digital or "thought or voice processing" has prompted a need for voice recognition software (Johnson, 1989, p. 74). In some cases, the software is voice activated and allows the dictator the

flexibility to turn the system "off" and "on" as necessary. A popular package currently marketed by Dragon Systems is "DragonDictate™-30K, which has a vocabulary of 30,000 words. The $8,995 system consists of a speech recognition board, a headset, and software" (Pond, 1991, p. 92). Other popular systems are IBM *VoiceType*, Lanier Worldwide's *RAD-station*, Verbex *Voice System*, and *Speech Secretary*. Voice-activated software has opened the use of dictation systems to special needs groups.

A specialized use of digital systems is court reporting. According to a video created for the National Court Reporting Association (1990), the use of digital systems in courtrooms is becoming the standard. All attorneys, the jury, and the judge have a terminal that allows them to review testimony verbatim in real time (as the event is happening). These specialized systems allow the judge to make appropriate rulings on motions or objections. Some systems are linked to law databases which allow the judge to "call-up" relevant cases in order to expedite the judicial procedure.

Features

Electric/analog systems share some common features such as indexing and cueing. Features found on portable units include pause, travel lock, dual-speed, indexing, voice-activated, record/battery indicator, end-of-tape warning signal, and remote access (The Office, 1990). Desktop and centralized units utilize many of these same features.

Electronic/digital systems add various features because of the use of computers. These systems are accessible by phone, can allow reports or messages to be listened to from remote locations, may allow transcription to be done in order of priority, may operate at higher speeds, provide higher reliability, can be customized, and can be upgraded easily via software. In addition, these systems can be merged with other technologies such as voice recognition, voice synthesis, information processing, and voice processing (Lavoie, 1990, p. 82). Some systems contain computer menus that facilitate the use of the software. A popular feature is the ease of editing the stored message. A dictator can recall a stored message and either add to or delete information as necessary. Most digital equipment is voice activated and offers the flexibility of random access.

Conclusion

Dictation systems are ever changing. The need for such systems has just been tapped. Technological advances in both digital and analog systems are helping the transfer from pen and paper to machine. Such technology will soon enter the classroom; this requires a development of teaching methods.

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METHODS FOR TEACHING DICTATION SYSTEMS

Dictation Systems can be defined as an efficient means of using recording tools to give an accurate, verbatim, written record

of oral conversations. This section will focus on the different methodologies that can be used in teaching dictation systems. These methods can be divided into three categories: general, machine and manual.

General

There are as many general methods of teaching dictation systems as there are teachers. Each teacher has his/her own method of teaching, depending on the types of students enrolled and the systems or equipment available. However, one method could involve students doing research to determine: (1) what jobs and skills are needed in the workplace today; (2) what jobs are available in the community as well as globally; and (3) what types of dictation systems are being used. The use of telecommunications has created endless opportunities for employment around the world. No longer are jobs restricted to a certain location.

Field trips could be made to local vendors to view and discuss new technology. Then field trips could be made to local hospitals, office equipment centers, computer stores, utility companies, manufacturing companies, and other businesses so students could see the different jobs, skills, and equipment that are actually being used. By knowing what types of dictation systems are available, and by learning to use each one, students can be adequately prepared to enter the job market. They also will be able to make intelligent decisions regarding the best system for their company. Other factors used in determining the best dictation system for the company would be the size of the company as well as personal taste.

Another method or technique to enhance learning would be to invite speakers to come talk about the types of dictation systems they use as well as what skills, jobs, and equipment their companies are looking for. These speakers also could practice dictating to the class. This would give the class an overview of the vocabulary used in different professions.

Games such as "Jeopardy," "Hollywood Squares," "Bingo," and "Family Feud" can be used as motivational tools as well as to enhance problem-solving strategies. The use of puzzles and bulletin boards are also excellent teaching aids.

On-the-job training is a wonderful opportunity for students to learn while working. Students have access to classroom technology as well as specialized training. This also can be a source for teachers to use in updating their methods to be consistent with what businesses really want and need.

An apprenticeship is another means of learning. According to Webster, an apprentice is "someone learning a craft or trade from an employer to whom he is bound by legal agreement for a specified period." An apprentice works one-on-one to learn his/her trade. In the classroom, the teacher works one-to-many or one-to-few depending on how large the class is and guides the students in how to use the equipment. The teacher could use this method in instructing students in the use of tapes. He/she would get the students started and then let them continue as he/she oversees how they are learning and doing.

Some schools have learning center labs that are equipped with both taped and untaped material with which students may practice.

> For the most part, individualized instruction will consist of multichannel listening-station units or individualized tape playback units. In considering individualized instructional materials and equipment, attention should be given to the listening types (tapes and records), the listening/viewing types (videotapes, Sound-Page, sound-slide), and the printed-material types (programmed instruction, learning activity packets, job instruction sheets, books, magazines, and the like) (Crank, Anderson, and Peterson, 1982, p. 215).

Proofreading, editing, and formatting are essential techniques to master. These three tools are valuable in the workplace. Being able to find mistakes and to make corrections as well as using correct grammar is a must in dictation systems.

> Editing is more efficient with a digital system because 'insert' and 'delete' functions allow the users to make changes within the document itself. With analog technology, editing is usually done by marking the location of an intended change with a cue tone. Instructions for this cue tone are then located at another point on the tape (Gragg, 1989, p. 15).

When preparing to format dictation, it is best to use the same format that the transcriber is used to. This will save time as well as money for the business.

Role playing in cooperative learning groups can be helpful to students in learning to be both dictators and transcribers. One suggestion would be that "while one student dictates, the other two could observe and offer guidance and feedback" (Hammer, 1984, p. 30). Students working in small groups can help each other by giving support, encouragement, feedback, and guidance. Learning to work as a team is another important element in today's office.

In-basket exercises, practice sets, and simulations which provide "on-the-job training" practice are other methods that can be used to teach dictation systems. These exercises can be used to mimic actual job conditions, thus giving the student a true feeling for the job.

Machine

Machine methods of teaching dictation systems include both electric and electronic equipment. With the growing use of dictation-transcription machines and word processing systems, faster and more efficient methods of handling correspondence are achieved. However, "the best equipment in the world is useless in the hands of someone who does not bother to learn how to use it effectively" (Gragg, p. 15). Therefore students should practice with as many types of electric and electronic equipment as they can. They should know how to use and care for each piece of equipment that they handle. One way to accomplish this would be through guided practice. Through demonstrations with the equipment, the teacher can show proper usage and handling techniques. "A demonstration of equipment operation should be followed immediately by student imitation" (Hammer, p. 30). The more a student practices with the equipment, the more confident he/she will be in using that equipment. The key word here is practice, practice, and more practice.

Another form of guided practice could involve having a student dictate while the class transcribes at the typewriter, microcomputer, or terminal. "Throughout the semester try to give

each student an opportunity to dictate to the class. In this way, students are learning to 'speak' the dictation as if they were using dictation equipment" (Morrison, 1985, p. 60). This type of exercise also can be used with student evaluations.

Measurement and evaluation is a must. There need to be guidelines that reinforce the students' operation and handling of the equipment. The same measurements that have been used in the past are not the only way to accomplish these. Be creative in evaluations. Use checksheets, other students, and testing devices to show students' weakness as well as strengths. "Without knowledge of where improvement is needed, an individual has no basis for further skill development" (Hammer, p. 31).

Teachers should be aware that there are videotapes available from vendors that can be excellent teaching tools for the classroom. Also, the new and emerging technology of laserdiscs are bringing the real world into the classroom.

Manual

Manual dictation includes both symbol and alphabet shorthand. Even though these systems have been used for many years, there is still disagreement among educators as to the best teaching strategy. Numerous approaches have been tried, but no one method prevails. "There is no one combination of teaching strategies which meets all students' needs. Also, success of any teaching strategy is dependent upon the teacher" (Schrag and Poland, 1987, p. 265). However, educators do agree that there are three

essential parts that make up the shorthand program. These three parts are theory, speed building, and transcription.

Theory is the first integral part of the shorthand program. New theory can be presented on the chalkboard, on transparencies, and on tapes. Individualized instruction and/or group instruction can be used in the reading and spelling of shorthand outlines. "Students will read correctly only if drilled to establish good reading habits" (Schrag and Poland, p. 266). Teacher demonstrations also are very useful with either group or individualized instruction. Another method that can be used in reading and spelling shorthand outlines is "paired reading." "One person reads while the other uses the transcript to check the reading and prompts if the reader cannot read within 5 seconds" (Schrag and Poland, p. 267).

Speedbuilding is the second part of the integral shorthand program. There have been many speedbuilding plans and modifications through the years. Teachers usually alternate different plans to provide variety as speedbuilding activities usually begin as soon as students begin to write. Although there are many plans in existence, four plans appear to be the most commonly used today and are summarized below:

1. "The Pyramid Plan utilizes half-minute speed sprints at rates of 40 wpm above the base speed. The ultimate objective is to combine half-minute writing sprints to increase the writing speed by 20 wpm" (VanHuss, Lambrecht, and Christensen, p. 78).

2. The One-Minute Speedbuilder Plan uses selected short segments of material and increases the rate each time a segment is dictated.

3. The One-Minute Plan uses selected material that consists of 100 words. The material is then dictated at 60 wpm for one minute. Words are added in increments of 15 and speed is increased by the same amount. Again dictation is for one minute. This is continued until all 100 words are dictated in one minute.

4. The Stair-Step Plan combines repetition and speed building in a stair-step fashion. For example, three different speeds may be practiced: the teacher begins dictating at 60 wpm; then moves to 70 wpm; then drops back to 60 wpm; and finally pushes students to reach 80 wpm. This sequence starts again by beginning to dictate at 70 wpm; the dictation speed then moves to 80 wpm; then moves to 90 wpm; and finally drops again to 70 wpm. The sequence begins all over again in a stair-step fashion.

Transcription is the third integral part of the shorthand program. "The ultimate objective of shorthand is to transcribe notes written from dictation into a usable transcript... Transcription is a multifaceted skill that integrates typewriting skills, shorthand recording skill, and communication skills" (VanHuss, Lambrecht, and Christensen, pp. 89-90). Too often, transcription is the least-stressed part of the shorthand system.

There are many drills that can be used to aid in transcription. An example of some are spelling, punctuation, word division, commas, proofreading, mailability, and letter parts. The

key word to remember here is drill, drill, drill. The more drills that are done, the better the chances for becoming a good transcriptionist.

Speakers can provide a creative twist to regular class procedures. An example of this would be to have an administrator or a businessperson in the community dictate to the class. This will let students experience the dictation styles of others. Another example would be to "secure a tape of 'real' dictation from a local office and have the students record the dictation in shorthand, and then discuss the quality of the dictation" (Morrison, p. 61).

Measurement and evaluation are very important not only to the teacher but to the students. Whenever possible, involve students in self-evaluation, and be creative. The more that they can learn to critique their own work and set their own standards, the better it will be for them when they are on the job. If they cannot find and correct their own mistakes, who will?

> The assignment of meaningful grades is largely dependent upon a sound evaluation program...The purpose of any grade is to depict as clearly as possible the quality of important instructional outcomes achieved in a course (VanHuss, Lambrecht, and Christensen, pp. 113, 138).

The next section will cover the important elements of recruiting techniques for dictation systems.

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RECRUITING TECHNIQUES FOR DICTATION SYSTEMS

The time has come to increase the techniques used for recruiting those skilled in dictation systems. After all, the demand for this skill will not be met if people are not aware of the need. Through recruitment, the many advantages for those who possess these skills can be relayed to the general public (students, parents, school personnel, business leaders, etc.). For example, the public probably does not know that "shorthand is worth an extra dollar an hour--which means about $2,000 a year--over the same bundle of office skills without shorthand" (Brendel, 1987, p. 1). Without promotion, the public will not know that skills in dictation systems open the door to a wide range of job opportunities. This range spans from secretarial/clerical duties in various business offices to specialty jobs such as medical transcriptionist or court reporter. In the past, this field has consisted primarily of women. This sex stereotyping also can be addressed through publicity. Skills in dictation systems are nonsexist. "The same opportunities are open to men as are open to women" (Brendel, p. 1). Without recruitment, the general public has no way of knowing about the hidden technology--dictation systems or the skills needed in this technology. That is why successful recruiting techniques are necessary. The keys to success in recruitment are setting goals, planning creative activities, targeting the right audiences, enlisting various types of media, and marketing the many benefits.

Setting Goals

Visibility is clearly the most important goal to set to improve the recruiting techniques of those skilled in dictation systems. It is also vital that a follow-up procedure or instructions such as an address or telephone number be available for those who want further information. But, there is still some middle ground to cover. That middle ground is to first set realistic but very specific goals. Once goals are established, deadlines for meeting these goals can then be declared. Specific goals and deadlines provide an accurate record for the measurement of the results and outcomes. An example of a specific goal is to increase enrollment in the transcription class by 5 students during the first year and 10 students during the second year.

Planning Creative Activities

Once the promotional purposes are established, a touch of creativity through activities can go along way. Therefore, the number of possible activities is limited only by the imagination. For instance, orientation day at school might include the opportunity for prospective students to see demonstrations and to participate in hands-on experiences with various dictation systems. Involvement can be enhanced with motivational activities such as games and contests. A job fair for students is another possibility. Business leaders from the community could be asked to set up booths and be available to answer questions about their businesses and the skills needed to be a part of that business.

Targeting the Right Audiences

If the right audiences are not targeted, the goal setting and activity planning will be wasted. One focal point is students. A plan should be developed to inform students about the courses offered in dictation systems. Encourage parents to visit the school through activities, such as back-to-school night, open house, or career week. Then distribute pamphlets or brochures explaining the many benefits offered to those skilled in dictation systems. That way, "students and parents will have the information they need to make informed choices" (*This We Believe About the Promotion of Business Education*, 1988, p. 8). It is also essential that school personnel be aware of the various courses offered in dictation systems. Informed teachers and counselors can better advise students to their specific needs. If decision makers such as administrators, school board members, advisory committees, and legislators are included in the promotional strategies, they are then able to make more informed decisions on the allocation of resources. Community interest should also be addressed by "actively recruiting adults from the community who need office skills to return to or enter the job market" (Schindler, 1984, p. 7). And, finally, the business community will appreciate the effort put forth by educators to train students with more employable skills. Targeting the right audiences aids in the support of dictation systems. This support will help keep these programs alive.

Enlisting Various Types of Media

Promotional messages are transmitted to the target audiences through media. "There is a tremendous array of media available for use in promotion" (Lynch, 1986, p. 49). So, it is wise to use a mixture of the various types. It is impossible to list all the available choices that exist in media. Therefore, only three areas are discussed.

"Personal selling may be the most effective tool for promoting skills in dictation systems...Studies consistently show that good teachers with good personalities and a good reputation for delivering quality programs rarely have enrollment problems" (Lynch, p. 51). It is no secret that "students often sign up for classes on the basis of the reputation of the teacher" (Lynch, p. 51). For the achievement of effective personal selling, the teacher must "communicate extensively the features and benefits" (Lynch, p. 51) of their dictation systems program.

Another excellent medium for reaching all target audiences is mass media. Radio is one way to reach teenagers. Radio spots and skits can be played regularly over the school's PA system. Televisions, VCRs, and videotapes may be used for in-school promotional purposes in cafeterias, hallways, and classrooms. Feature articles in the school or community newspaper is another recruitment method to utilize.

Capture people's attention by way of visuals. Bulletin boards, displays, signs, posters, and banners can be strategically placed throughout the school and community. Eye-catching

brochures, booklets, and pamphlets may be distributed. The number of people reached by advertising on T-shirts, pens, caps, decals, etc. is immeasurable. Other useful approaches include direct mail, seminars, modeling, and oral group presentations.

Marketing the Benefits

The most relevant information to market is the benefits. Benefits should emphasize the personal advantages and/or personal gain one receives from being skilled in dictation systems. Learn "up-to-date skills in getting a job, earning money, and becoming independent" (Lynch, p. 21) is a sample benefit message. It should also be stressed that personal benefits are gained through membership in professional and student organizations. These organizations offer their members the opportunity to learn new skills and to refine those skills through competition. Promotional activities hosted by these organizations also make it possible to meet new people and to exchange new ideas. Professional organizations, such as Professional Secretaries International and the National Business Education Association, keep their members knowledgeable through literature and by conducting workshops, certification programs, and continuing education courses. Future Business Leaders of America and the Business Professionals of America keep students informed by newsletters and conferences. They also help students keep track of the various scholarships available through their programs.

Programs in dictation systems will flourish with the right blend of recruiting techniques. The key is to spread the message.

Once the students are recruited into the program, the instructors must educate them on basic information about dictation systems. The following detailed unit plan will be an extremely helpful tool to utilize in accomplishing this task.

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UNIT PLAN FOR DICTATION SYSTEMS

UNIT TITLE: **DICTATION SYSTEMS**

SUGGESTED TIME: **3 WEEKS** (minimum)

I. OVERVIEW

The student will learn the basic dictation systems; the need for dictation systems, the skills needed for dictation systems, and the types of dictation systems. The underlying assumption in teaching office skills is that office standards are the standards that are acceptable in the classroom. This includes learning attitudes, skills, and behaviors that will enable students to succeed on the job.

II. STUDENT PERFORMANCE OBJECTIVES

A. Demonstrate Basic Knowledge of and Need for Dictation Systems

1. What dictation systems are
2. Why dictation systems are easier to use and more accurate
3. Why technical skills in dictation systems are more efficient and cost effective
4. Why dictation systems are more adaptable to changing business and personal needs
5. Why dictation systems need motivated and thinking personnel

B. Demonstrate Basic Skills Needed with Dictation Systems

1. Basic foundation skills for reading, writing, listening, speaking, nonverbal communication, and performing arithmetic and mathematical operations

2. Basic thinking skills for thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning
3. Basic personal qualities for working in teams, responsibility, sociability, self confidence, ethics and morals, integrity/honesty, and self management
4. Basic technical skills for manual systems, electric and electronic machine dictation, current and future hardware and software, and information management

C. Familiarize Students with the Types of Dictation Systems

1. Manual dictation systems: symbol and alpha
2. Electric/analog systems according to different sizes
3. Electronic/digital systems according to availability

III. TEACHER PERFORMANCE OBJECTIVES

A. Demonstrate Methods of Teaching Dictation Systems

1. General methods of teaching dictation systems

a. define dictation systems
b. research
c. field trips
d. speakers
e. independent practice
f. simulation/in-baskets/practice sets
g. cooperative learning groups
h. proofreading/editing/formatting
i. on-the-job training
j. apprenticeship
k. problem solving
l. taped instruction
m. self-paced
n. games

2. Methods of teaching machine (electric/electronic) dictation systems

a. equipment
b. guided practice
c. video/laserdiscs
d. drills
e. measurement and evaluation

3. Methods of teaching manual dictation systems

   a. theory/speed building/transcription (manual systems)
   b. speakers (invite to dictate)
   c. drills
   d. measurement and evaluation

4. Utilize teaching resources for dictation systems, such as textbooks, magazines, equipment/materials, committees, and people (vendors, speakers, other teachers, parents, etc.)

B. Apply recruiting techniques for dictation systems

1. Goals
2. Activities
3. Audiences
4. Media
5. Benefits

C. Implement procedures to evaluate and measure students' knowledge, performance, and affective skills in dictation systems

1. Objective tests
2. Performance tests
   a. production
      (1) mailability
      (2) proofreading

   b. use of equipment
   c. care of equipment
   d. accuracy
   e. dictation

3. Attitude/participation (affective)
4. Role-playing
5. Communication
6. Techniques
   a. form (manual)
   b. machine
   c. thinking
   d. problem solving/decision making
   e. personal development

7. Homework/daily work

IV. <u>TOPICS TO BE COVERED</u>

A. Knowledge of and Need for Dictation Systems

1. Research need
   a. Newspaper advertisements
   b. Community sources
      (1) Personnel directors
      (2) Personnel agencies
      (3) Other businesses

   c. International sources
   d. Databases

2. Accuracy/cost benefits
3. Training
4. Adaptable to changing business and personal needs
5. Motivated, thinking personnel

B. Skills Needed for Dictation Systems

1. Basic foundation skills
   a. Reading
   b. Writing
   c. Listening
   d. Speaking
   e. Nonverbal
   f. Math

2. Thinking skills for dictation systems
   a. Creativity
   b. Decision making
   c. Problem solving
   d. Visualizing
   e. Knowing how to learn
   f. Reasoning

3. Personal skills for dictation systems
   a. Teamwork
   b. Responsibility
   c. Sociability
   d. Self confidence
   e. Ethics and morals
   f. Integrity/honesty
   g. Self management

4. Technical skills for dictation systems
   a. Manual and machine
   b. Equipment care and use
   c. Equipment selection
   d. Equipment troubleshooting

C. Types of Dictation Systems
   1. Manual: symbol and alpha
   2. Electric/analog

a. Portable
b. Desktop
c. Centralized
d. Networked

3. Electronic/digital
a. Desktop
b. Centralized
c. Networked

V. STUDENT LEARNING ACTIVITIES

A. Theory/Speed Building/Transcription
B. Guided Practice (apprenticeship)
C. Independent Practice (tapes)
D. Drills
E. Simulations/In-baskets/Practice Sets
F. Cooperative Learning Groups
Example: Role playing dictator/transcriber
G. Games
Examples: Bingo, Hollywood Squares, Jeopardy, Family Feud, scavenger hunts, etc.
H. Homework
I. On-the-job Training
J. Field Trips
Examples: vendors, office supply centers, businesses, school offices, other classrooms, etc.
K. Speakers
L. Videos/Laserdiscs
Examples: from vendors, from television programs, etc.
M. Research
N. Dictation from TV, songs, lecture, sermons, etc.
O. Flash cards
P. Puzzles

VI. RESOURCE MATERIALS

A. Textbooks
B. Businesses
C. Advisory Committees
D. Videos/laserdiscs
E. Trade magazines/Periodicals/Journals
F. Transparencies
G. Multichannel Tapes
H. Dictation Books
I. Transcription Materials
J. Student Dictation Records
K. Dictation Equipment
L. Overhead Projectors/LCD projector
M. Closed-circuit television
N. Typewriters
O. Computers and Software

P. Radio/TV/VCR
Q. Flash cards
R. Stopwatch/Timer
S. People: Vendors, other teachers, speakers, ex-students, experts
T. Bulletin boards/displays
U. Puzzles

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